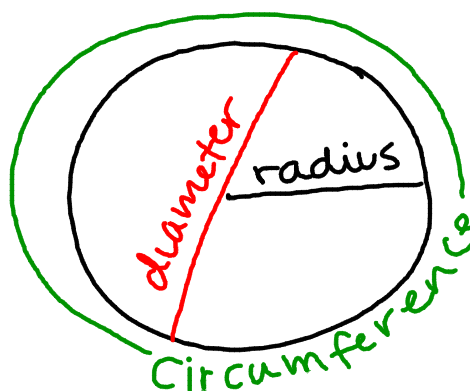


1) Draw a circle and label

- a. radius
- b. diameter
- c. circumference



2) Define perimeter

3) Define the following quadrilaterals:

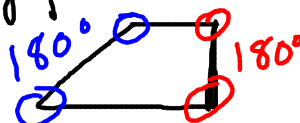
a. square all congruent sides  
90° angles

b. rhombus 2 pairs of sides all congruent sides  
are parallel 2 pairs congruent angles

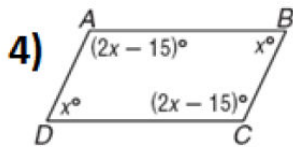
c. parallelogram  2 pairs of parallel sides, congruent angles

d. rectangle 2 pairs cong sides  
90° angles

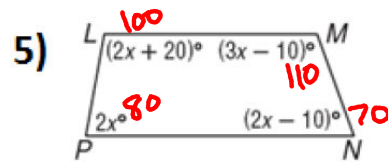
e. trapezoid 1 pair of parallel sides



Find the measure of each interior angle using the given information.



$$\begin{aligned}
 180 &= 2x - 15 + x \\
 180 &= 3x - 15 \\
 +15 &\quad +15 \\
 195 &= 3x \\
 \frac{195}{3} &= \frac{3x}{3} \\
 x &= 65 \text{ (D \& B)} \\
 2x - 15 &= 115 \text{ (A \& C)}
 \end{aligned}$$



$$\begin{aligned}
 180 &= 4x + 20 \\
 -20 &\quad -20 \\
 160 &= 4x \\
 x &= 40
 \end{aligned}$$

*ABCD* is a rectangle.

- 6) If  $AC = 2x + 13$  and  $DB = 4x - 1$ , find  $x$ .

$$x = 7$$

$$\begin{aligned}
 2x + 13 &= 4x - 1 \\
 14 &= 2x
 \end{aligned}$$



- 7) If  $AC = x + 3$  and  $DB = 3x - 19$ , find  $AC$ .

$$x = 11$$

$$\begin{aligned}
 x + 3 &= 3x - 19 \\
 22 &= 2x
 \end{aligned}$$

- 8) If  $AE = 3x + 3$  and  $EC = 5x - 15$ , find  $AC$ .

$$\boxed{60}$$

$$6x + 6 = AC$$

$$\begin{aligned}
 3x + 3 &= 5x - 15 \\
 18 &= 2x \quad x = 9
 \end{aligned}$$

- 9) If  $DE = 6x - 7$  and  $AE = 4x + 9$ , find  $DB$ .

$$6x - 7 = 4x + 9$$

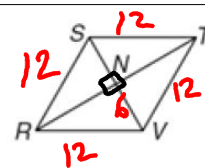
$$2x = 16$$

$$x = 8$$

$$DB = 12x - 14$$

$$\boxed{= 82}$$

Use rhombus  $RSTV$  with  $RS = 5y + 2$ ,  $ST = 3y + 6$ , and  $NV = 6$ .



10) Find  $y$ .

$$5y + 2 = 3y + 6$$

$$y = 2 \quad 2y = 4$$

13) Find  $TV$ .

$$12$$

11) Find  $m\angle NTV$ .

$$30$$

14) Find  $m\angle SVT$ .

$$60$$

12) Find  $m\angle RST$ .

$$120$$

15) Find  $m\angle SRV$ .

$$60$$

In  $\odot R$ ,  $\overline{AC}$  and  $\overline{EB}$  are diameters. Find each measure.

16)  $m\angle ERD$

$$28$$

17)  $m\angle BRC$

$$44$$

18)  $m\angle ARE$

$$44$$

19)  $m\angle CRD$

$$108$$

20)  $m\angle ARB$

$$136$$

21)  $m\angle BRD$

$$152$$

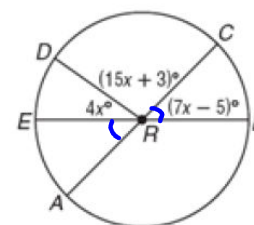
$$4x + 15x + 3 + 7x - 5 = 180$$

$$26x - 2 = 180$$

$$+2 \quad +2$$

$$26x = 182$$

$$x = 7$$



For Questions 22-25, refer to  $\odot C$ .  $\overline{AB}$  is a tangent, and  $\overline{AD}$  and  $\overline{AE}$  are secants.

**22)** Find  $AC$ .

26

**23)** Find  $AB$ .

$$10^2 + b^2 = 26^2 \quad b^2 = 576$$
$$b = 24$$

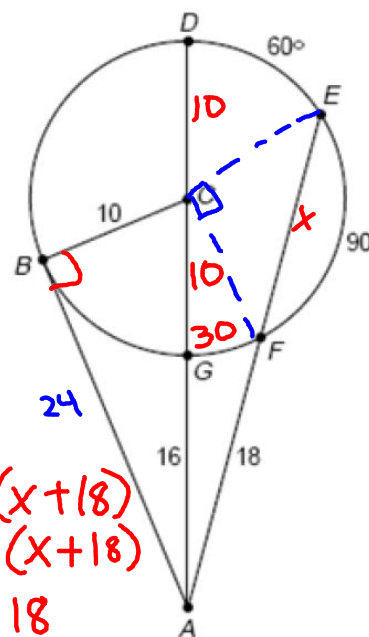
24) Find  $m\angle DAE$ .

$$\frac{1}{2}(60 - 30) = 15$$

**25)** Find  $FE$ .

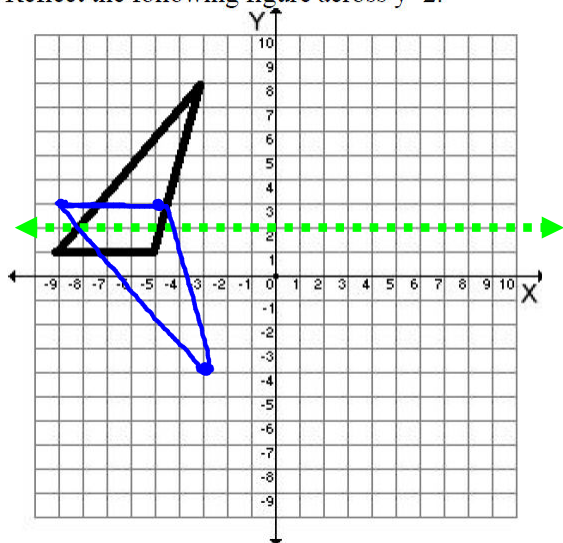
$$\begin{aligned} 10^2 + 10^2 &= c^2 \\ 200 &= c^2 \\ \sqrt{200} &= c \end{aligned}$$

$$\begin{array}{r} 24^2 = 18(x+18) \\ 576 = 18(x+18) \\ 32 = x+18 \\ -18 \quad -18 \\ 14 = x \end{array}$$

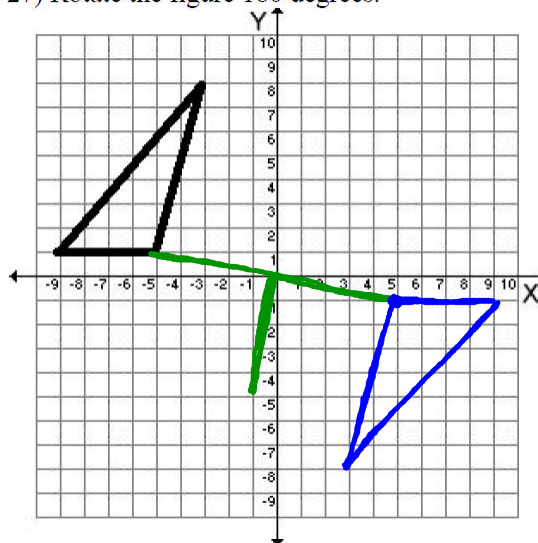


26)

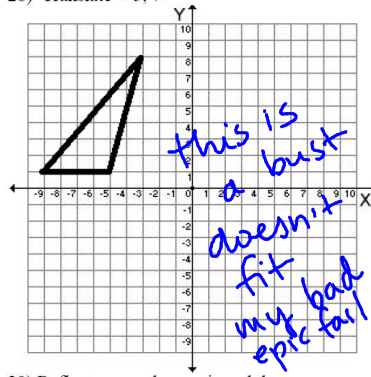
Reflect the following figure across  $y=2$ .



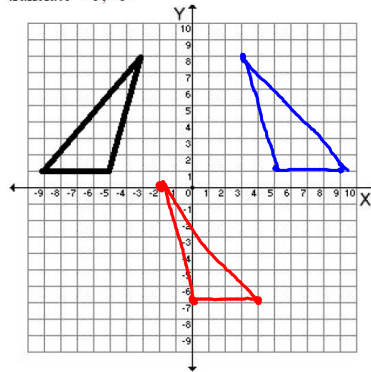
27) Rotate the figure 180 degrees.



28) Translate  $\langle -5, 7 \rangle$



29) Reflect across the y axis and then translate  $\langle -5, -8 \rangle$



30) Reflect across the x axis and then rotate 90 degrees.

